

REMARKS

Claims 1-76 were pending and presented for examination and in this application. In an Office Action dated July 26, 2006, claims 3, 26, 28, 30, 32, and 34 were objected to, and claims 1, 2, 4-25, 27, 29, 31, 33, and 35-76 were rejected. Applicants thank Examiner for examination of the claims pending in this application and address Examiner's comments below.

Applicants are canceling claims 23, 25, 26, and 52-76 and amending claims 1, 6, 7, 24, and 44 in this amendment. These changes are believed not to introduce new matter, and their entry is respectfully requested. In making these amendments, Applicants do not concede that the subject matter of the claims in their original form was in fact disclosed or taught by the cited prior art. Rather, Applicants reserve the right to pursue such protection at a later point in time and merely seek to pursue protection for the subject matter presented in this submission.

In view of the amendments herein and the remarks that follow, Applicants respectfully request that Examiner reconsider all outstanding objections and rejections, and withdraw them.

Response to Rejection Under 35 USC § 112, Paragraph 1

In the 3rd paragraph of the Office Action, Examiner rejected claims 52-76 under 35 USC § 112, ¶ 1 as allegedly failing to comply with the enablement requirement, and in the 5th paragraph rejected claim 44 as having insufficient antecedent basis. Claims 52-76 have been canceled, and claim 44 has been amended, thereby addressing these rejections. Applicants reserve the right to pursue protection over the subject matter of claims 52-76 at a later point in time.

Response to Rejection of Claims 1-6, 24, and 27-51

As noted by Examiner on Paragraph 12 of the Office Action, “capturing, during a single poll, a plurality of images” and related elements are absent from the prior art and comprise allowable subject matter. Language that reflects these elements has been incorporated into each of independent claims 1, 6, and 24, as follows:

- Claim 1 has been amended to recite:

An optical sensing assembly for a computer input device configured to receive power from a self-contained power source, the optical sensing assembly for adjusting power consumption of the assembly based on data sensed in response to a single data query, the assembly comprising:

- a photo-sensitive element configured to receive reflected light from a light source to produce a first image data associated with a first image and a second image data associated with a second image and to provide the first image data and the second image to an image processing logic in response to the single data query;
- an image data processing logic coupled to the photo-sensitive element for receiving the image data and configured to determine image difference data from differences between the first image data and the second image data; and
- a power control logic operatively coupled to the image data processing logic and configured to implement a native power control mode wherein an internal algorithm changes the power consumption of the optical sensing assembly from a full power mode to one or more lower power modes based on the image difference data.

- Claim 6 has been amended to recite:

A method for detecting movement with a photo sensing device configured to receive power from a self-contained power source, the method comprising:

- receiving reflected light from a light source during a single poll to produce a first image data associated with a first image and a second image data associated with a second image;
- determining image difference data from differences between the first image data and the second image data; and
- implementing a native power control mode wherein an internal algorithm changes the power consumption of the photo-sensing device from a full power mode to one or more lower power modes based on the image difference data.

- Claim 24 has been amended to recite:

A method of managing power consumption of a wireless device having a plurality of power consumption modes, the method comprising:

in a first power consumption mode:

querying for a first activity data at a first average polling rate by capturing a plurality of images during each poll at the first average polling rate, in response to receiving the first activity data, maintaining the first power consumption mode, and

in response to receiving no first activity data for a time period associated with the first power consumption mode, transitioning to a second power consumption mode;

in the second power consumption mode:

querying for a second activity data at a second average polling rate that is lower than the first average polling rate,

in response to receiving the second activity data, transitioning to the first power consumption mode, and

in response to receiving no second activity data for a time period associated with the second power consumption mode, transitioning to a third power consumption mode; and

in the third power consumption mode:

querying for a third activity data at a third average polling rate that is lower than the second average polling rate, and

in response to receiving the third activity data, transitioning to the first power consumption mode.

Each of these claims, in their present form, includes allowable subject matter on noted in Paragraph 12 of the Office Action. Thus claim claims 1 and 24, and claims 2-5, and 27-51, which depend on them respectfully, and claim 6, are in a condition for allowance. Applicants respectfully request that Examiner withdraw all rejections or objections to these claims and allow them.

Response to Rejection of Claims 7-22

Independent claim 7 has been amended to incorporate the elements of claim 23 in its previous form. Examiner rejected claim 23 as obvious in view of U.S. Patent No. 5,854,621 (“Junod”) and U.S. Patent No. 5,457,478 to Frank et al. (“Frank”). This rejection is

respectfully traversed, as applied to independent claim 7 in its current form, and claims 8-22 which depend on it.

Claim 7 recites a method of managing power consumption of a wireless device wherein the device comprises one of a mobile phone, a text messenger, and a personal digital assistant. In the 9th paragraph of the Office Action, Examiner admits that neither Junod nor Frank teaches any of these classes or types of electronic devices. (Applicants respectfully submit that the references are lacking other elements of claim 7 as well.) Instead, Examiner attempts to fill the gap by asserting that “the power saving system of Junod’s wireless mouse as modified by Frank is well understood to be applicable to other devices such as a mobile phone.”

Applicants respectfully disagree with this conclusion. The use, performance requirements, and power management constraints of the mouse of the prior art and the “mobile phone, text messenger, or personal digital assistant” of the claimed invention differ significantly. Even assuming a common goal of power efficiency, many different power management schemes could be used to conserve and manage power in a mobile phone, text messenger or personal digital assistant. Without the benefit of the present application, it would not be apparent to modify the prior art in the ways needed to achieve the particular method of power consumption management recited in claim 7, including its three power consumption modes and techniques for transitioning therebetween. For at least this reason, claim 7 is patentable over the cited reference. If Examiner maintains this rejection, or introduces a new rejection similarly based on personal knowledge, Applicants respectfully request that Examiner present a reference or affidavit, or state facts, in support of such rejection.

In the absence of a properly formed rejection, Applicants request that Examiner remove any outstanding rejections and objections and allow claims 7-22.

Conclusion

In sum, Applicants respectfully submit that claims 1-22, 24-25, and 27-51, as presented herein, are patentably distinguishable over the cited references. Therefore, Applicants request reconsideration of the basis for the rejections to these claims and request allowance of them.

In addition, Applicants respectfully invite Examiner to contact Applicants' representative at the number provided below if Examiner believes it will help expedite furtherance of this application.

Respectfully Submitted,
SIMONE ARRIGO ET AL.

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